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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/696,309	10/28/2003	Anthony E. Turvey	A2WI2304US	7568
23935	7590	07/08/2005	EXAMINER	
KOPPEL, JACOBS, PATRICK & HEYBL 555 ST. CHARLES DRIVE SUITE 107 THOUSAND OAKS, CA 91360			NGUYEN, KHANH V	
			ART UNIT	PAPER NUMBER
			2817	

DATE MAILED: 07/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/696,309 Examiner Khanh V. Nguyen	TURVEY, ANTHONY E. <i>(initials)</i> Art Unit 2817

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 25 April 2005.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-16 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-3,5,6,9-13,15 and 16 is/are rejected.  
 7) Claim(s) 4,7,8 and 14 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5, 9, 10, 15, 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Seevinck et al. (4,992,755).

Regarding claims 1, 5, 15, 16, Seevinck et al. (Fig. 2A) disclose an amplifier circuit having common-mode voltage comprising: a first difference amplifier (N1, N3) connected to compare a first input voltage (2) with a feedback voltage (voltage output from amplifier (10)) to provide a first result (node 5); a second difference amplifier (N2, N4) connected to compare a second input voltage (3) with a feedback voltage (voltage output from a differential amplifier (10)) to provide a second result (node 6); and a differential amplifier (10) can be read as a feedback amplifier can also be read as comparing step connected to drive the feedback voltage to a level that is substantially the average of the first and second input voltages (2, 3) in response to receiving the first and second results at nodes (5, 6).

Regarding claim 2, wherein the differential amplifier (10) is an operational amplifier having inverting (7) and non-inverting (8) inputs to receive the first and second results (5, 6).

Regarding claim 3, wherein the first and second difference amplifiers (N1, N3 and N2, N4) can be a first and second transconductance amplifiers, respectively.

Regarding claims 9, 10, wherein transistors (P2, P3) can be operated as first and second impedances.

Claims 1-3, 5, 9, 10, 15, 16 are rejected under 35 U.S.C. 102(b) as being anticipated by McCormack et al. (4,904,953).

Regarding claims 1, 5, 15, 16, McCormack et al. (Fig. 2) disclose an amplifier circuit having common-mode voltage comprising: a first difference amplifier (Q1, Q10) connected to compare a first input voltage (+) with a feedback voltage (VCM) to provide a first result at an immediate node to the drain of transistor (Q1); a second difference amplifier (Q2, Q11) connected to compare a second input voltage (-) with a feedback voltage (VCM) to provide a second result at an immediate node to the drain of transistor (Q2); and a differential amplifier (20) can be read as a feedback amplifier can also be read as comparing step connected to drive the feedback voltage to a level that is substantially the average of the first and second input voltages (+, -) in response to receiving the first and second results.

Regarding claim 2, wherein the differential amplifier (20) is an operational amplifier having inverting (-) and non-inverting (+) inputs to receive the first and second results.

Regarding claim 3, wherein the first and second difference amplifiers (Q1, Q10 and Q2, Q11) can be a first and second transconductance amplifiers, respectively.

Regarding claims 9, 10, wherein transistors (Q3, Q4) can be operated as first and second impedances.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 6, 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seevinck et al or McCormack et al.

Regarding claim 6, Seevinck et al. disclose the claimed invention except utilizing bipolar transistors as claimed. Seevinck et al. utilized field effect transistors having gate, drain and source. However, it is well known in the art that bipolar transistors and field effect transistors can be used interchangeably. As such, replacing field effect transistors of Seevinck et al. with bipolar transistors would have been obvious to one having ordinary skill in the art.

Regarding claim 11, Seevinck et al. disclose the claimed invention except the impedances are resistors. However, it is known in the art that transistor can also act as an impedance which can also be replaced with a resistor. As such, replacing transistor(s) of Seevinck et al. with resistor(s) is considered within ordinary skill in the art.

Regarding claim 12, 13, see rejected claim 6, wherein transistors (N1, N3) can be read as first and second transistors, respectively and transistors (N2, N4) can be read as third and fourth transistors, respectively.

***Allowable Subject Matter***

Claims 4, 7, 8, 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 4 calls for, among others, currents ( $I_P$  and  $I_N$ ) according to the equations claimed.

Claims 7, 8, 14 call for, among others, a current source having the connections thereof.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh V. Nguyen whose telephone number is (571) 272-1767. The examiner can normally be reached from 8:00 AM - 3:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571) 272-1769. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



KHANH V. NGUYEN  
PRIMARY EXAMINER